

IN THE CLAIMS:

Please amend the claims as follows:

Claim 1. (Currently Amended).

A process for the wet chemical treatment of semiconductor wafers with treatment liquids in baths, comprising consisting of the steps of

firstly treating the semiconductor wafers in a bath with an aqueous HF solution only containing HF and optionally HCl and optionally a surfactant;

then treating the semiconductor wafers in a bath with an aqueous O<sub>3</sub> solution only containing O<sub>3</sub> and optionally HF; and

then treating the semiconductor wafers in a bath with an aqueous HCl solution only containing HCl and optionally O<sub>3</sub>;

whereby these treatment steps form a treatment sequence B<sub>2</sub>, which avoids rinsing with water or another treatment liquid and the addition of fresh water or other liquids to the treatment baths.

Claim 2. (Previously Presented).

The process as claimed in claim 1,  
wherein the treatment sequence  $B_2$  is preceded by a treatment  
 $B_1$  of the semiconductor wafers with an aqueous SC-1 solution.

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Claim 3. (Original).

The process as claimed in claim 1,  
wherein the treatment sequence  $B_2$  is followed by a treatment  
 $B_3$  comprising drying the semiconductor wafers.

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Claim 4. (Original).

The process as claimed in claim 3,  
wherein the treatment of the semiconductor wafers is  
sequenced according to the term  $m^* (B_1 + B_2) + B_3$ ,  
 $m$  being an integer number and the treatment  $B_1$  and the  
treatment sequence  $B_2$  being carried out in succession, and  
this taking place  $m$  times, before the drying treatment  $B_3$  is  
performed.

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Claim 5. (Original).

The process as claimed in claim 1,  
wherein in treatment sequence  $B_2$ , the aqueous HF solution  
contains HF in a concentration of from 0.001% to 2% by weight and

optionally HCl in a concentration of up to 2% by weight and optionally a surfactant; and

wherein all percents by weight are based upon the total solution weight.

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Claim 6. (Original).

The process as claimed in claim 1,  
wherein in treatment sequence B<sub>2</sub>, the aqueous O<sub>3</sub> solution contains O<sub>3</sub> in a concentration of from 1 ppm to 30 ppm and is optionally exposed to megasonic waves.

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Claim 7. (Original).

The process as claimed in claim 1,  
wherein the treatment liquid used last in the treatment sequence B<sub>2</sub> contains ozone and is optionally exposed to megasonic waves.

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Claim 8. (Original).

The process as claimed in claim 3,  
wherein the drying treatment is carried out using a step selected from the group consisting of centrifuging, using hot water, using isopropanol, and using marangoni principle.

Claim 9. (Previously Presented).

The process as claimed in claim 2,

wherein in treatment B<sub>1</sub> the aqueous SC-1 solution contains a liquid selected from the group consisting of NH<sub>4</sub>OH and H<sub>2</sub>O<sub>2</sub>, and TMAH (= tetramethylammonium hydroxide) and H<sub>2</sub>O<sub>2</sub>.

Claim 10 (Cancelled).

Claim 11. (Currently Amended).

A process for the wet chemical treatment of semiconductor wafers with treatment liquids in baths, comprising consisting of the steps of

firstly treating the semiconductor wafers in a bath with an aqueous HF solution only containing HF and optionally HCl and optionally a surfactant;

then treating the semiconductor wafers in a bath with an aqueous O<sub>3</sub> solution only containing O<sub>3</sub>, and optionally HF; and

then treating the semiconductor wafers in a bath with an aqueous HCl solution only containing HCl and optionally O<sub>3</sub>, with exposure to megasonic waves,

whereby these treatment steps form a treatment sequence B<sub>2</sub>, which avoids rinsing with water or another treatment liquid and the addition of fresh water or other liquids to the treatment

baths.

Please add new claims 12 to 15 as follow:

Claim 12. (New).

A process for the wet chemical treatment of semiconductor wafers with treatment liquids in baths, comprising the steps of firstly treating the semiconductor wafers in a bath with an aqueous HF solution containing HF and optionally HCl and optionally a surfactant;

then treating the semiconductor wafers in a bath with an aqueous O<sub>3</sub> solution containing O<sub>3</sub> and optionally HF; and

then treating the semiconductor wafers in a bath with an aqueous HCl solution containing HCl and optionally O<sub>3</sub>;

whereby these treatment steps form a treatment sequence B<sub>2</sub>; and

circulating the treatment liquids of said baths by taking a part from each of said baths, filtering and returning the part to the corresponding treatment bath.

Claim 13. (New).

A process for the wet chemical treatment of semiconductor wafers with treatment liquids in baths, comprising the steps of firstly treating the semiconductor wafers in a bath with an aqueous HF solution containing HF and optionally HCl and optionally a surfactant;

then treating the semiconductor wafers in a bath with an aqueous O<sub>3</sub> solution containing O<sub>3</sub> and optionally HF; and

then treating the semiconductor wafers in a bath with an aqueous HCl solution containing HCl and optionally O<sub>3</sub> with exposure to megasonic waves;

whereby these treatment steps form a treatment sequence B<sub>2</sub>; and

circulating the treatment liquids of said baths by taking a part from each of said baths, filtering and returning the part to the corresponding treatment bath.

Claim 14. (New)

A process for the wet chemical treatment of semiconductor wafers with treatment liquids in baths, comprising the steps of firstly treating the semiconductor wafers in a bath with an aqueous HF solution containing HF and optionally HCl and optionally a surfactant;

then treating the semiconductor wafers in a bath with an

aqueous O<sub>3</sub> solution containing O<sub>3</sub> and optionally HF; and  
then treating the semiconductor wafers in a bath with an  
aqueous HCl solution containing HCl and optionally O<sub>3</sub>; and  
circulating the treatment liquids of said baths by taking a  
part from each of said baths, filtering and returning the part to  
the corresponding treatment bath;  
whereby these treatment steps form a treatment sequence B<sub>2</sub>,  
which avoids rinsing with water or another treatment liquid and  
the addition of fresh water or other liquids to the treatment  
baths.

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Claim 15. (New) .

A process for the wet chemical treatment of semiconductor  
wafers with treatment liquids in baths, comprising the steps of  
firstly treating the semiconductor wafers in a bath with an  
aqueous HF solution containing HF and optionally HCl and  
optionally a surfactant;  
then treating the semiconductor wafers in a bath with an  
aqueous O<sub>3</sub> solution containing O<sub>3</sub> and optionally HF; and  
then treating the semiconductor wafers in a bath with an  
aqueous HCl solution containing HCl and optionally O<sub>3</sub>, with  
exposure to megasonic waves; and  
circulating the treatment liquids of said baths by taking a

part from each of said baths, filtering and returning the part to the corresponding treatment bath;

whereby these treatment steps form a treatment sequence  $B_2$ , which avoids rinsing with water or another treatment liquid and the addition of fresh water or other liquids to the treatment baths.